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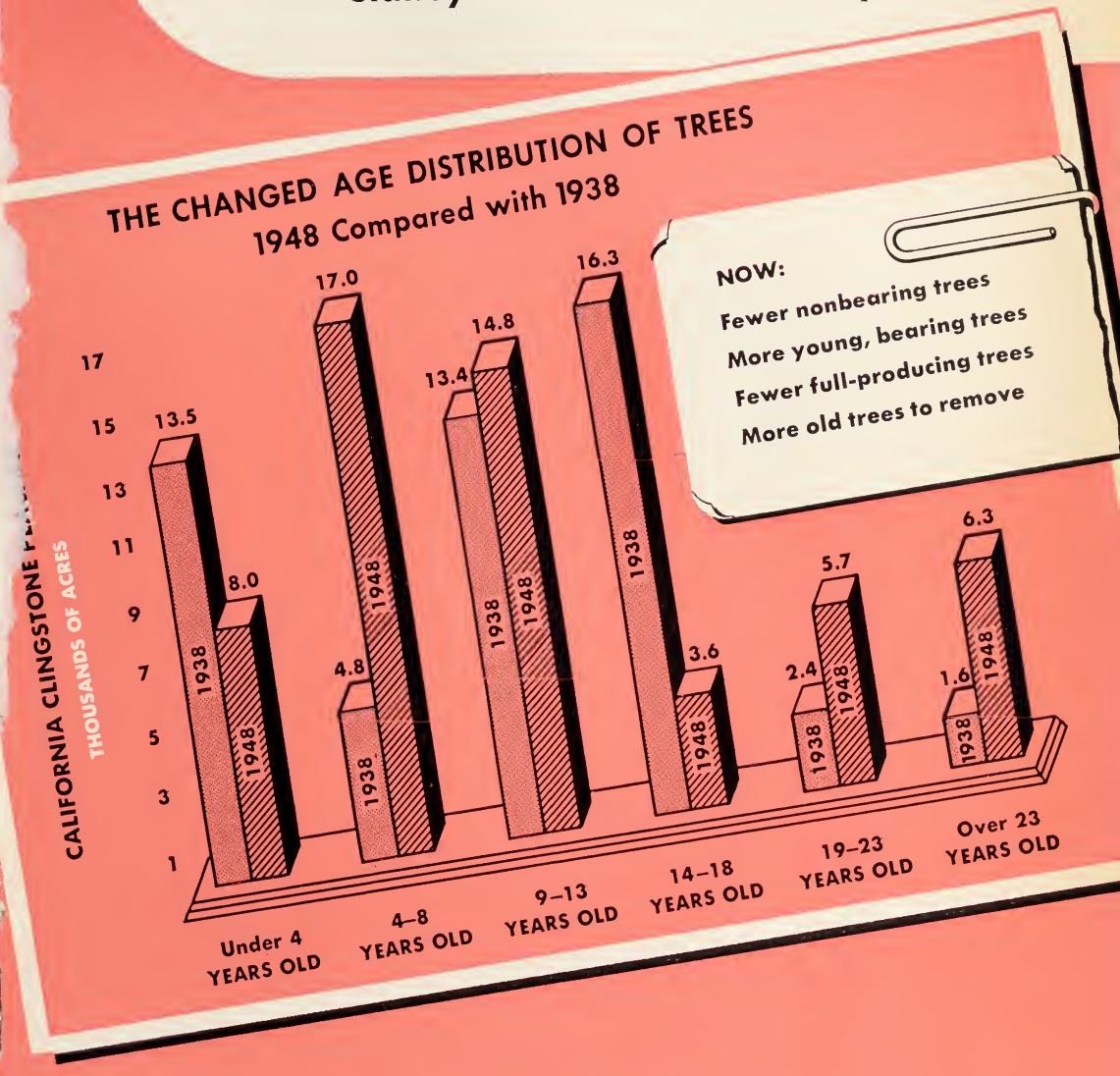
CALIFORNIA CLINGSTONE PEACHES ECONOMIC STATUS, 1948

Sidney Hoos and H. Fisk Phelps



THE COLLEGE OF AGRICULTURE
UNIVERSITY OF CALIFORNIA · BERKELEY

PRODUCTION

of Clingstones has been increasing since 1935, with a record high of 554,000 tons in 1946. Age distribution of trees has changed greatly in the past ten years. In 1948 there were 3½ times as many newly bearing acres; only one fifth as many acres in middle life; and 3 times as many acres with old trees as there were in 1938. Future production will be determined by

Acreage trends, influenced by numbers of young trees coming into bearing and numbers of old trees removed; and by

Average yield, influenced by age distribution, shifts in location, changes in varieties, the weather, and general cultural practices.

● THE PRODUCTION OUTLOOK is for a leveling off or decrease in bearing acreage after 1948, but increased yields may hold production at its present high level for several years.

UTILIZATION

of Clingstones averages 90% into canning channels, and in 1946 and 1947 a record high of 97% was reached. Use in fresh form and as dried fruit is negligible. An increasing quantity of the canning tonnage is being used in mixed packs, which in 1947 took 23% of the canning crop. Future packs will be determined by

Available supply of peaches for canning, determined by bearing acreage and yield; and by

Consumer demand, which is related to the level and distribution of consumer income, the retail price, and the prices of competing canned fruits.

● THE UTILIZATION OUTLOOK is for future packs to at least equal that of 1947, but more competition can be expected from other canned fruits and fruit cocktail.

FARM PRICES

for Clingstones have declined substantially since the war. Costs of production have continued their wartime increase. Canners' prices are somewhat more stable, and retailers' prices are a good deal more stable, than are prices to farmers.

● FUTURE NET RETURNS will depend more than in the past upon maintenance of high yields, improved management, and on keeping down unit costs of production and operation.

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FOR MOST AGRICULTURAL crops, the quantity produced in any year is determined by the acreage planted and the yield per acre, yield being affected by variety, pests, location, weather, and cultural care. With tree crops, however, the factors influencing total production are more complex. Acreage planted in one year does not come into bearing for several years; the age distribution of the trees markedly affects the yield; the amount of nonbearing acreage influences future production; and cultural care, or lack of it, alters yields over the life of the tree as well as for the current crop year.

Major Influences

To evaluate correctly the production trends and the production potential of the California Clingstone peach industry, each of the major influencing factors must be studied and related to all other factors. The current bearing acreage is one of the most important single factors in determining the season's production. The present bearing acreage, however, is the result of plantings from four to fifteen years previous as well as the result of removals of old trees, and is not alone indicative of future trends in bearing acreage. The nonbearing acreage plus an estimate of removals must be known also.

Another important factor in determining production trends is yield per acre. Yield is determined principally by the age of the trees. The peach usually comes into commercial production at four years. Production increases rapidly to a peak between nine and twelve years, and then gradually declines. Commercial production is often not profitable after an orchard reaches twenty years, because of aged or weakened trees. Though the age of the trees largely determines their yield per acre, the variety planted and the location of the acreage may cause great variations among different orchards. Certain varieties are subject to diseases, or sensitive to delayed foliation, or require careful thinning. Many new varieties have been introduced in an attempt to correct for these and other defects.

Growing Conditions

The ideal conditions for peach production are cool winters, infrequent spring frosts, and warm summers free of fog and high humidity. The locations more nearly approaching these conditions are in the central valleys of California; the coast sections have too much fog and cool weather, and the southern sections often do not have cold enough winters to prevent injurious delayed foliation. Shifts in the varietal composition of trees and shifts in the location of acreage, may cause significant results in the realized yield per acre. It is, of course, obvious that weather, the extent of cultural care, and the prevalence of diseases, pests, or pathological conditions will also modify the yield within the limitations of the age, variety, and location of the trees. All have a direct bearing on production.

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FACTORS THAT AFFECT PRODUCTION

ACREAGE

Clings vs. Freestones

Since California Freestone peaches are either a major or minor competitor of California Clingstone peaches in all forms of utilization, it is interesting briefly to compare their respective trends in acreage. Figure 1 shows, by years, the total acreage in each type in California since 1934. The Clingstone and Freestone acreages have followed somewhat different trends, with the fluctuations in the Freestone acreage generally greater. Although Clingstone acreage has remained constant over the last few years, acreage of Freestone peaches has been steadily increasing. Plantings of Freestones have been increasing each year since 1943, and are now just below \$50,000 acres.

Clingstone Acreage

From the middle 1920's to the middle 30's, the total acreage planted to Clingstone peaches in California decreased gradually. Large plantings from 1920 to 1927 had resulted in greatly increased production in the late 1920's and early 1930's. Growers were forced to leave considerable quantities of fruit on the trees, almost one half the total production from 1930 to 1933. Consequently, plantings during these years were greatly reduced. By 1934, however, plantings each year were again about equaling removals, and from then through 1943, total acreage remained fairly constant, varying from 50,000 to 54,000 acres (fig. 1). In 1944, total Clingstone acreage jumped to over 57,000 acres and has remained at about that level over the last three years.

Age Distribution

California Clingstone total acreage during the past four years has been substantially greater than earlier. During the past decade there have been significant shifts in the bearing acreage, which is an important factor in considering production trends. Due to the reduced plantings from 1928 to the middle 30's, bearing acreage decreased rather rapidly to a low in 1938 of 38,362 acres (fig. 2). After remaining fairly stable through 1941, Clingstone bearing acreage began a gradual increase which has continued through 1947.

The bearing acreage in any year is related directly to the plantings four years earlier and to removals in the previous year. Since most trees come into bearing in the fourth year, four-year-old acreage is considered as bearing acreage. Through the late 1930's and into 1941, new bearing acreage (acreage planted four years earlier) balanced removals each year, resulting in relatively constant bearing acreage. Since 1941, the new acreage coming into bearing each year has gradually decreased, but removals of acreage each year decreased even more because of the greater demand and higher prices for peaches.

Estimated Acreage

Future levels in the bearing acreage of California Clingstone peaches will, of course, be determined again primarily by the plantings four years previous and the removals of older or diseased and weakened trees. On the basis of plantings from 1944 to 1948, the estimated new acreage which will come into bearing over the next four years, 1948–1951, will, with the exception of 1948, continue the downward trend.

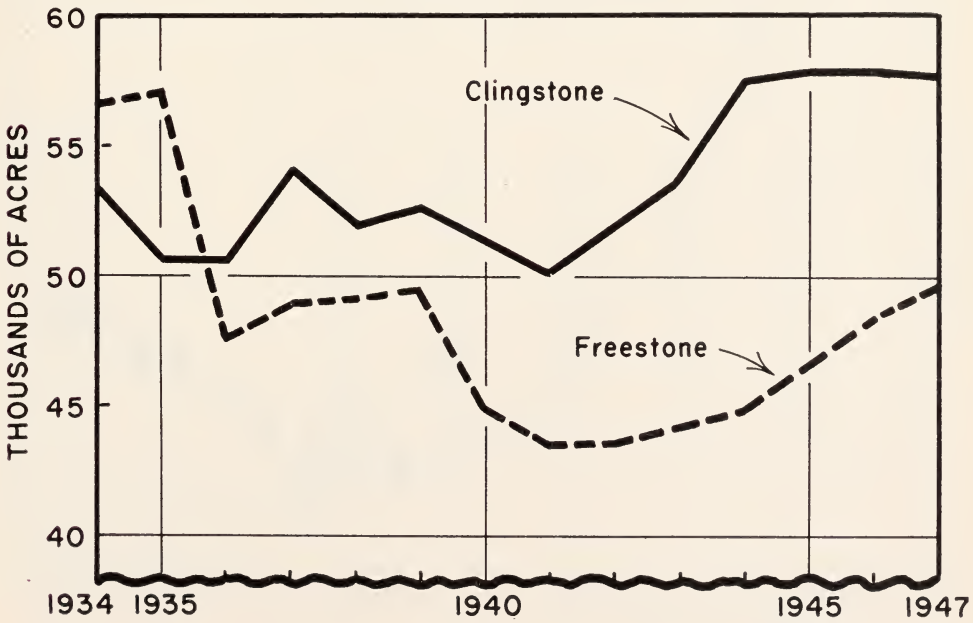
The acreage which will be removed over the next four years is, of course, not known and estimates are difficult to make.

The extent of removals will depend primarily upon the age distribution of the present bearing acreage, but also upon the demand for peaches, the general price level, and the purchasing power of consumers. The latter factors cannot be forecast accurately, but a comparison of the age distribution of the present bearing acreage with the age distribution in 1938 may give some indication of probable removals. Table 1 below, shows the percentage age distribution of the bearing acreage in 1938 and 1948. Significant differences are evident between these two years. First, there are now almost three and a half times as many young trees which have just come into bearing as there were in 1938. Second, there are about one fifth the number of trees in middle life, 14–18 years, as there were in

Table 1: AGE DISTRIBUTION OF CALIFORNIA CLINGSTONE PEACH ACREAGE, 1938 AND 1948

Age group	In 1938		In 1948	
	Acres	Per cent	Acres	Per cent
Nonbearing	13,470	.....	8,055	.....
Bearing:				
4– 8	4,470	11.7	16,987	35.8
9–13	13,420	35.2	14,819	31.2
14–18	16,290	42.7	3,619	7.6
19–23	2,360	6.2	5,714	12.0
24 and over	1,598	4.2	6,340	13.4
		100.0		100.0

Figure 1: TOTAL ACREAGE OF CALIFORNIA CLINGSTONE AND FREESTONE PEACHES



1938. And most important, there are three times as many trees 19 years old or older as there were in 1938, due to the almost complete cessation of removals during the first years of the war.

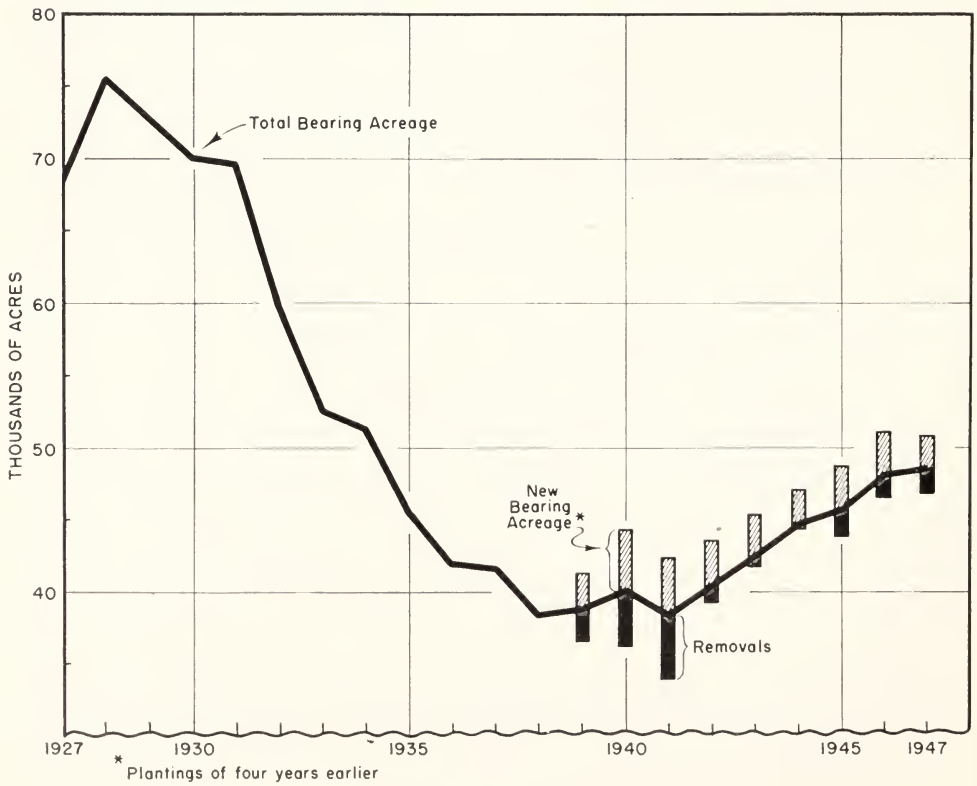
With such a large proportion of the present trees near or past their maximum bearing, it can be expected that removals will be heavier than usual over the next few years. In fact, removals each year since 1945 have been greater than during the early war years, indicating that growers probably have been forced to increase removals in recent years even though the demand for peaches has remained high. It is probable that removals over the next few years will continue at least as high as the 1945–1947 level. In this event, bearing acreage would increase slightly in 1948 and then level off through 1951. If removals are increased during that period, bearing acreage would then decrease.

Location of Acreage

The location of California's Clingstone peach acreage is principally concentrated in four Central Valley districts where climatic conditions are more favorable for peach production. In 1947, 95.2 per cent of the total acreage was located in the following districts: 39.5 per cent in the Marysville district, 9.9 per cent in the Stockton district, 34.3 per cent in the Modesto district, and 11.5 per cent in the Fresno district. Almost 90 per cent of the state's cling peach acreage is in seven counties in the Sacramento–San Joaquin valleys.

The county distribution of acreage in the four districts is as follows: Marysville district—Sutter, 75 per cent; Butte,

Figure 2: CALIFORNIA CLINGSTONE PEACH BEARING ACREAGE, SHOWING INFLUENCE OF NEW BEARING ACREAGE AND REMOVALS



14 per cent; Yuba, 11 per cent. Stockton district—San Joaquin, 97 per cent; Contra Costa, 3 per cent. Modesto district—Stanislaus, 76 per cent; Merced, 24 per cent. Fresno district—Tulare, 79 per cent; Fresno, 9 per cent; Kings, 8 per cent; Kern, 2 per cent; Madera, 2 per cent.

Though some shifts in acreage have occurred over the last 12 years, only two have been of significant magnitude. Table 2 shows the total bearing and nonbearing acreage which is located in the four major Clingstone districts, and in all other areas in the state. While some districts have maintained a relatively constant bearing acreage, the Modesto district has shown a substantial increase, the Marysville district has expanded since 1941, and "all other" districts in the state have shown a steady decrease. The trend toward increased concentration of acreage in the four important Central Valley districts is further emphasized by the present distribution of the state's nonbearing acreage.

Because of the more ideal growing conditions in the major districts, the noted shifts in acreage might be expected to increase the state's yield per acre of Clingstone peaches.

Clingstone Varieties

Since the Clingstone peach is used primarily for canning, the varieties grown in the state have been those best adapted to canning. In an attempt to find better adapted varieties, and to increase the yield and quality of the fruit, major shifts have occurred in the varietal pattern of Clingstone peaches grown in California. Table 3 gives the percentage which each important variety of Clingstone peach was of total bearing acreage in the state since 1938. The Halford variety has shown a great increase and is now the largest single variety grown. Gaume has increased substantially, while Paloro, Phillips, and Tuscan have decreased. Prior to 1930, Phillips and Tuscan were the two most important varieties; but their acreage in recent years declined heavily because they were subject to gumming, split-pits, and other characteristics

Table 2: BEARING ACREAGE OF CALIFORNIA CLINGSTONE PEACHES BY PRODUCING DISTRICTS, 1936–1947; AND NONBEARING ACREAGE, 1947

Year	Marysville	Stockton	Modesto	Fresno	All others	Total
	Acres					
Bearing acreage:						
1936	16,558	3,290	8,855	6,180	6,998	41,881
1937	16,244	3,716	8,519	5,890	7,229	41,598
1938	13,497	3,675	8,734	5,608	6,848	38,362
1939	14,190	3,462	9,482	5,474	6,116	38,724
1940	15,915	3,433	11,229	5,199	4,289	40,065
1941	14,289	3,359	11,580	5,215	3,801	38,244
1942	15,153	3,638	12,155	5,707	3,703	40,356
1943	15,830	4,024	12,982	5,937	3,583	42,356
1944	16,722	4,096	13,696	6,246	3,776	44,536
1945	16,932	4,273	14,183	6,339	3,855	45,582
1946	17,850	5,287	14,876	6,385	3,629	48,027
1947	18,432	4,891	15,760	5,452	2,504	47,039
Nonbearing acreage:						
1947	3,771	675	3,546	995	214	9,201
Per cent distribution 1947 nonbearing	(41.0)	(7.3)	(38.6)	(10.8)	(2.3)	(100.0)

Table 3: CALIFORNIA CLINGSTONE PEACH ACREAGE, SHOWING PERCENTAGE PLANTED TO DIFFERENT VARIETIES, 1938–1947

Year	Total	Gaume	Halford	Johnson	Paloro	Peak	Phillips	Sims	Tuscan	All other
	Per cent of total acreage									
Bearing:										
1938	100.0	10.2	2.6	2.4	20.3	8.4	27.6	8.0	6.5	14.0
1939	100.0	11.5	4.0	2.6	20.0	8.3	25.9	8.2	5.9	13.6
1940	100.0	12.8	6.7	3.1	19.9	9.1	23.6	7.5	4.7	12.6
1941	100.0	15.1	9.6	3.1	19.4	8.6	20.7	7.4	2.9	13.2
1942	100.0	15.3	11.0	3.3	18.5	9.0	19.3	7.5	2.8	13.3
1943	100.0	15.8	12.1	3.6	18.1	9.5	17.6	7.5	2.5	13.3
1944	100.0	15.8	12.8	3.7	17.5	9.8	16.7	7.9	2.2	13.6
1945	100.0	16.1	13.9	3.9	16.7	9.9	15.3	8.0	2.0	14.1
1946	100.0	16.0	15.4	4.2	16.2	9.6	13.6	7.9	1.7	15.4
1947	100.0	16.0	17.5	4.5	15.1	9.6	12.1	7.2	0.7	17.3
Nonbearing:										
1947	100.0	3.3	11.5	3.5	6.1	6.1	0.8	2.5	0.0	66.2

giving low usable tonnage not satisfactory for canning. Although there has been little change in the proportion of total bearing acreage made up of "all other" varieties, there have occurred shifts within the "other varieties" group. In 1938, "all other" varieties included Libbee, Levi, Orange Cling, Sutter, and additional ones. But in 1947, the "all other" group consisted largely of Fortuna, Shasta, Carolyn, Corona, Stuart, and additional new varieties.

Effect of Variety Change

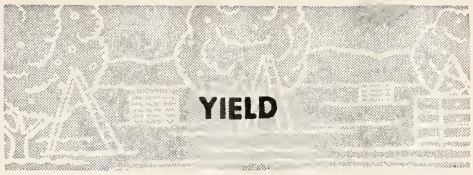
The data on nonbearing acreage, shown in the above table, further emphasizes the shifts to varieties giving higher yields and better quality fruit. With the exception of Halford, plantings from 1944 to 1947 have not been sufficient to maintain the bearing acreage of any of the older varieties. With two thirds of the present nonbearing acreage planted to new varieties (one third of this acreage is Fortuna), it is evident that further significant shifts will take place in the varieties of Clingstone peaches being grown.

The varieties of Clingstone peaches grown in the state are important not only because of their effect upon the yield and quality of fruit produced, but also because of the time and sequence of ripening of the various varieties. The grower should consider the sequence of maturity of his varieties in relation to the most efficient use of harvest labor and equipment. For maximum utilization of plant and equipment, the canning industry needs a long season, as well as uniform distribution of deliveries throughout that period.

The largest removals have been of Tuscan and Phillips—the earliest and the latest canning varieties; newer plantings have been made largely of the midseason varieties. As a result, the canning season has been materially shortened with consequent overtaxing of canning facilities.

Better Distribution

Some correction of this situation has been made the last two years with increased plantings of the early Fortuna variety and the late Gomes and Stuart varieties. Nevertheless, the distribution of tonnage over the season needs to be further coördinated among growers and processors as new acreage is planted. Only in this way can best use be made of canning equipment and labor.



Comparative Yields

Over the last twenty years, the yield per acre of Clingstone peaches has been well above that of Freestones. The following table shows the respective yields since 1930. Though both have shown a steady increase in yields, Clingstones have consistently remained about three tons per acre higher.

Table 4: CALIFORNIA CLINGSTONE AND FREESTONE PEACH YIELDS

Period or year	Clingstone	Freestone
	Tons per bearing acre	
1930–1934 average	6.4	3.7
1935–1939 average	8.2	4.4
1940–1944 average	9.5	6.8
1945	10.2	6.7
1946	11.5	8.1
1947	10.6	7.4

Past Trends in Yield

Since 1936, the average yield per acre of Clingstone peaches in California has not only been at a substantially higher level than in previous years, but has evidenced a steady upward trend (fig. 3). During the three five-year periods, 1930–1934, 1936–1940, and 1942–1946, California's Clingstone yield per bearing acre rose from an average of 6.4 tons to 8.7 tons and then in the third period to an average of 10.3 tons. The yield for 1947 was 10.6 tons per bearing acre. More favorable weather conditions in the 1942–1946 period were partly responsible for the jump in yield in this latter period. Increased cultural care under the stimulus of higher prices was also a contributing factor.

Though the factors noted above may partially explain the increase in the level of yields, other factors are also responsible for the steady upward trend since 1932. The gradual shifts in acreage from the coastal and southern California areas to the more favorable inland valley districts have been important.

The changes in varietal pattern have also resulted in an increased yield per acre. Plantings over the last ten years have been predominantly of the greater-yielding, more disease-resistant varieties which produce a greater percentage of No. 1 fruit.

Due recognition must also be given to the effects of newer knowledge and techniques in orchard management and cultural practices in raising yields.

Changing Age Distribution

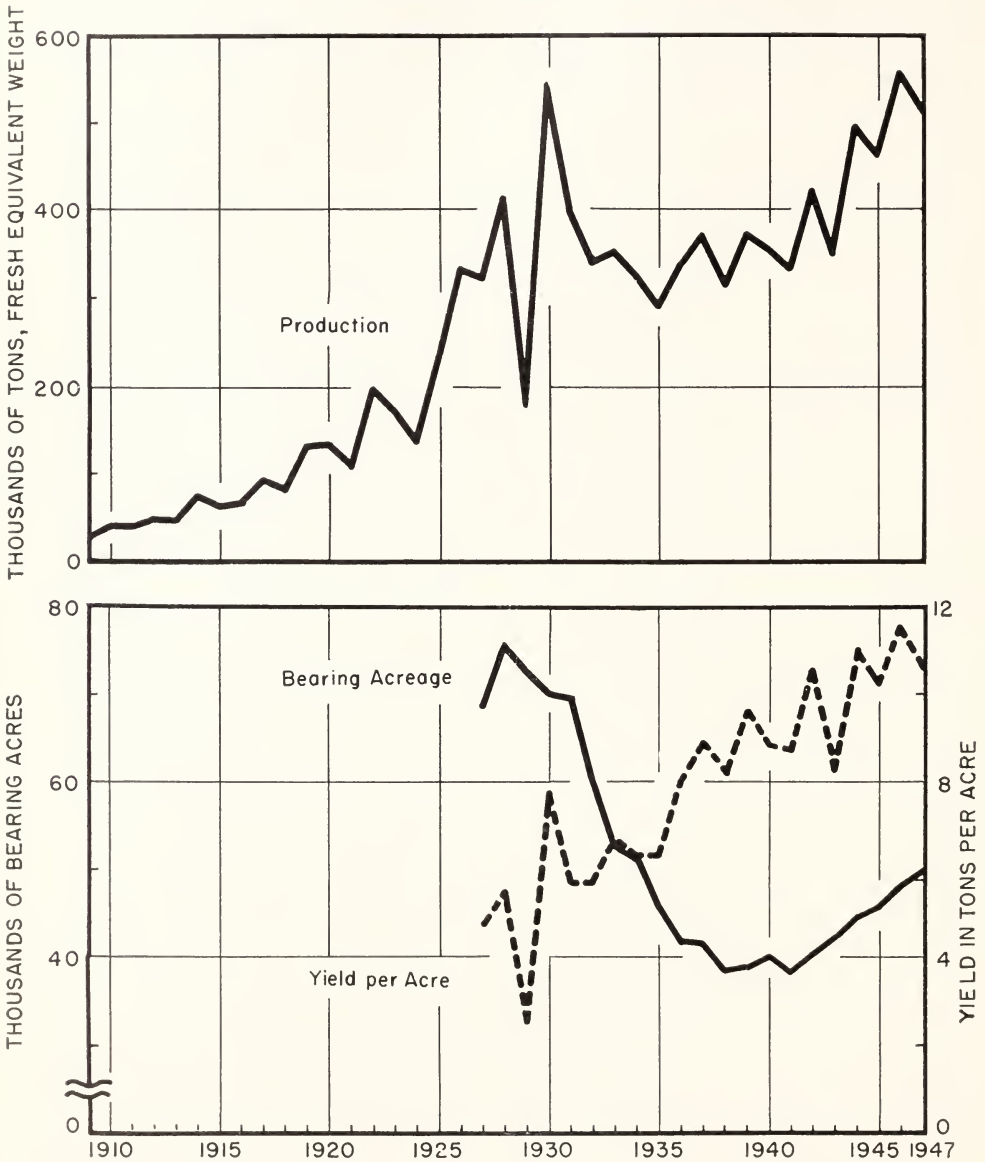
The higher yield per acre during 1942–1947 has been made in spite of the unfavorable age distribution of the trees since 1942. Beginning with that year, removals of older trees were decreased to about one third what they had been during the preceding five-year period. This resulted in an increasing percentage of older, lower-yielding trees. By 1948, as shown in table 1, 25 per cent of the bearing acreage was 19 years old or older, as compared with only 10 per cent in 1938. Also, the number of trees at the peak of their bearing life (9–18 years) was considerably less, 39 per cent in 1948 as against 78 per cent in 1938. The combination of the other factors—favorable weather, better cultural practices, and changes in acreage location and in varieties—more than counterbalance the decreasing-yield effect of the unfavorable age distribution, and the result was an increase in the yield per acre.

Probable Yields

The future trend of the yield per acre for California Clingstone peaches cannot be estimated accurately because of the unpredictable factors which can cause

appreciable variations, namely: weather, cultural care, and diseases. The location of the acreage has become more favorable; the varieties being planted are higher yielding; and the age distribution of the bearing acreage will rapidly become more favorable to higher yields due to the present greater-than-normal percentage of young trees one to seven years old. Thus, the yield potential over the next few years will probably be somewhat greater than at present. Yields should continue increasing, then, provided weather conditions are not too adverse and provided improved cultural practices are maintained.

Figure 3: CALIFORNIA PRODUCTION, BEARING ACREAGE, AND YIELD OF CLINGSTONE PEACHES



PRODUCTION

California's Position

Although this circular is concerned primarily with California Clingstone peaches, it will be well to devote attention briefly to the position of California with regard to the total production of both Clingstone and Freestone peaches in the United States. Peaches are grown extensively throughout the United States and are of commercial importance in some forty states. Since 1909, however, California has been by far the leading producer. In 1947, this state produced over five times as many peaches as the next most important producer. Average production during the period 1943–1947 shows Georgia as following California, with South Carolina, Michigan, Washington, North Carolina, Colorado, Arkansas, and Pennsylvania next in that order.

California's importance in United States peach production is further brought out in table 5. Column 1 shows California production as a per cent of total United States production. Since 1925, this state has held approximately the same relative position with an average of about 40 per cent of the United States total. Georgia, the next most important producer, has contributed only about 8 per cent to total production over the last few years.

Commercial Production

The commercial production in states other than California consists almost entirely of Freestones, but California produces both the Clingstone and Freestone types. Table 5 also shows the relative importance of the two types in California. Prior to 1925, Freestone production in California greatly exceeded the production of Clingstones. From 1925 to the present, however, Clingstones have made up about 60 per cent of total California peach production. Whereas Clingstone production has shown an upward trend over the years, Freestone production dropped off some in the early 1920's from a level of about 10 million bushels to about 8½ million. Freestone production remained at this level through 1941 when wartime influences caused a substantial increase; production turned downward again in 1945.

Table 5: CALIFORNIA PEACH PRODUCTION AS PER CENT OF UNITED STATES PRODUCTION

Year	California peach production as per cent of United States production	California Clings as per cent of total California production	California Freestones as per cent of total California production
	Per cent		
Five year averages:			
1915–1919	29.8	25.7	74.3
1920–1924	34.1	39.0	61.0
1925–1929	37.7	60.1	39.9
1930–1934	48.1	63.7	36.3
1935–1939	39.5	63.1	36.9
1940–1944	43.6	59.9	40.1
Annual:			
1945	37.8	63.0	37.0
1946	42.8	62.2	37.8
1947	40.3	64.2	35.8

The Production Picture

In general, Clingstone production has been increasing steadily since 1909. However, several distinct phases in this gradual increase are evident from figure 3. The gradual increase in production from 1909 to about 1921 was followed by a period of sharp increase through 1930. Actually, however, the upward trend in production during both these periods, 1909–1921 and 1922–1930, showed a constant rate of increase of about 12 per cent each year.

During 1931–1935 the production of Clingstone peaches decreased rather sharply. This decrease was due to several factors. Plantings since 1928 were not sufficient to offset the normal removals of trees due to old age. Low farm prices during this period also caused many growers to remove trees before they had reached the end of normal bearing life. Consequently, as shown in figure 3, bearing acreage fell off sharply. Also, most of the acreage in 1930 was at the age of maximum yield. Thus, for the next few years, no marked increase in yield occurred to offset the decrease in bearing acreage.

Leveling Off

In 1936, production leveled off, and held at a level of about 350,000 tons through 1941. Bearing acreage had continued to decrease through 1938, but then it remained constant through 1941. Thus, the leveling of production in 1936 was primarily due to the substantial jump in average yields per acre in that year, and the continuing increase thereafter. Shifts in varieties grown and in the location of the acreage, as well as increased cultural care, were largely responsible for these increasing yields.

Beginning with 1942, production began a steady upward trend which has continued to the present. The large plantings of 1936, 1937, and 1938, and the sharp decrease in the removal of older trees from 1942 on, resulted in a steady increase in bearing acreage. Yields also continued their gradual upward trend as high prices induced growers to improve cultural care. The increase in production, then, from 1942 to date has been a result of the increase of both these contributing factors.

Future Production

In attempting to estimate future trends in Clingstone peach production, an estimate must be made of both future bearing acreage and yield per acre. As pointed out earlier, the general trend of plantings over the last ten years has been downward. And even though removals over the past few years have been quite low, they can be expected to increase in the future because of the greater-than-normal percentage of old acreage still in bearing. The future profitableness of Cling peach production will, of course, affect each grower's decision as to the acreage he will take out. But with so many trees at the age usually considered as the end of profitable life, it is reasonable to expect that removals will increase. Bearing acreage, then, over the next few years will either be maintained at its present level, or begin decreasing if removals are heavy.

As brought out earlier, the future trend in average yield per acre is likely to continue upward. New plantings over the last few years have been in areas generally adapted to peach growing. Varieties subject to split pits, gumming, and other off-grade defects have been and are being removed. Cultural practices have been improved by growers not only because of higher prices, but also because of improved knowledge and techniques from research.

The present age distribution of the trees is favorable for increasing yields (table 1). There are over 6,000 acres 24 years old or older, which is considered the end of profitable life, and therefore, this acreage may be pulled in the next few years. Offsetting this old age

group, however, is the group of more than 8,000 acres classed as nonbearing. This group will have a continually increasing production in the future. The largest age group is from 4 to 13 years old. The oldest trees in this group should maintain their average production for the next few years while the youngest can be expected to increase in production. Thus, with all the influencing factors favorable, the average yield per acre should continue increasing for a number of years, providing normal weather and growing conditions prevail.

The general trend of California Clingstone peach production, then, over the next few years will continue upward. However, this increase will not be as rapid as it has been since 1942 because future bearing acreage will either decrease some or just be maintained. The continuing increase in yield should counteract any decrease in bearing acreage and insure a gradual increase in production for some years.

USE OF CALIFORNIA CLINGSTONES

THROUGHOUT the history of the California Clingtone peach industry, canning has been the chief outlet, and it is likely to remain so. The Clingstone peach is especially adapted to canning processes. Other forms of utilization—fresh, dried, frozen—have largely been resorted to as residual outlets when production was heavy. Table 6 shows the relative utilization of Clingstone peaches since 1910.

It should be noticed that in some years the total amount produced has not been harvested and used. Either a heavy crop or depressed economic conditions have been the usual reason for a partial harvest.

Low prices to both growers and canners in 1927 and 1928 resulted in 20 and 17 per cent, respectively, of the total crop being left on the trees. During the first three years of the depression, 1930–1932, almost one half of the crop was left unharvested each year. With the exception of 1941 and 1947, small quantities have been left unharvested each year since 1938.

Table 6: HOW CALIFORNIA CLINGSTONE PEACHES WERE USED, 1910–1947

Year	Proportion of total production		Proportion of harvested production			
	Harvested	Unharvested	Canned	Dried	Frozen and crushed	Used fresh
	Per cent					
Five-year averages:						
1910–1914	100.0	0	91.7	0	0	8.3
1915–1919	100.0	0	91.0	0	0	9.0
1920–1924	100.0	0	91.2	0	0	8.8
1925–1929	92.6	7.4	94.0	0	0	6.0
1930–1934	63.4	36.6	84.6	5.7	0	9.7
1935–1939	98.0	2.0	83.3	10.7	0	6.0
1940–1944	96.0	4.0	90.5	5.1	0.8	3.6
Years:						
1945	94.4	5.6	89.8	3.6	4.6	2.0
1946	98.7	1.3	96.9	0.7	0.7	1.7
1947	100.0	0	96.8	....	....	....

As shown in table 6, the proportion of harvested production used for canning has not varied appreciably since 1910. From 1910 through 1945, an average of 90 per cent has gone into canning. In 1946 this proportion increased to a new high of almost 97 per cent, and a similar proportion went into canning in 1947.

The drying of Clingstone peaches was not begun commercially until 1931. From 1931 through 1940, an average of about 10 per cent of the harvested production was dried. But since 1941 the proportion dried has been decreasing until it is now negligible. Beginning in 1943, small amounts of Clingstone peaches have been frozen or crushed, but this outlet has yet to become important.

Shipments of Clingstones into fresh markets have been made since the industry began. However, this outlet has been used largely when canners would not take the full crop. The largest proportion ever shipped fresh was in 1932, almost 19 per cent of harvested production. Over the last seven years, however, fresh shipments have dropped off and are relatively unimportant as an outlet for Clingstones. These varieties are Levy, Orange Cling, McDevitt, and Wiley.

Shipments of Fresh Clings

Of the total quantities marketed in fresh form, in-state shipments have far exceeded out-of-state shipments. Since 1935, fresh shipments out of state have constituted only 1 per cent or less of harvested production. And the varieties grown principally for distant shipment in fresh form have evidenced both decreased plantings and bearing acreage in recent years. Thus, out-of-state shipments of fresh peaches do not constitute even a minor outlet and will undoubtedly remain negligible in the future.

The shipment of fresh peaches within the state has been a minor outlet for Clingstones since the beginning of the industry. When canning prices are low, or when pack restrictions or grade limitations result in "surplus" quantities, diversion to fresh markets within the state can be resorted to. However, this outlet over the years has taken a gradually smaller proportion of harvested production, with less than 2 per cent in 1945 and 1946.

Use in Fresh Form

As mentioned earlier, the major varieties of Clingstone peaches are well adapted to canning processes; hence, few are used for fresh shipment. Over the years, the fresh market has been used largely to dispose of residual quantities of Clingstones not canned because of low prices, pack restrictions, or grade limitations. However, there are a few varieties of Clingstone peaches that are grown primarily for fresh use and distant shipment.

Quantities Dried

The commercial drying of Clingstone peaches was not begun until 1931, when about 8,100 tons were dried. The reluctance of canners to purchase any fruit except No. 1 Tuscans, Phillips, and New Midsummers, and the low prices received for Clingstones shipped East, encouraged some growers to dry a part of their fruit. Furthermore, the low prices of the depression years of the 1930's induced commercial dehydrators to buy some quantities.

The quantities dried each year increased sharply from 1933, reaching a high of 50,000 tons in 1936. Export markets were well established and consumer buying power was increasing so that large quantities continued to be dried through 1940. As shown in table 6, almost 11 per cent of harvested production was dried during 1935–1939. Beginning with 1941, however, the quantities dried each year decreased substantially to a low of less than 1 per cent of harvested production in 1946. This decrease was partially the result of the cutting off of the export market due to the war.

Returns from Dried Fruit

Returns to growers from drying peaches have consistently been about one half the returns from canning or fresh utilization. (See table 7.) From the grower's standpoint, then, it would seem that the outlet would be used only as a last resort. And it is doubtful that dried Clingstones will offer serious competition to dried Freestones in the future. The cost of dehydrating Clingstones is more expensive than sun-drying Freestones; additional costs are incurred in pitting and peeling Clingstones, and the drying ratio is considerably higher with Clingstones than with the principal varieties of Freestones. Thus, it does not seem likely that drying will be an important outlet for Clingstone peaches in the future.

Canning Outlets

Canning is the primary outlet for Clingstone peaches. The proportion of the total crop harvested which has been utilized for canning has varied from a low of 71.9 per cent in 1934 to a high of 96.9 per cent in 1946. The over-all average since 1909, however, has been about 90 per cent. No significant changes have occurred in the proportion canned. The minor variations in percentage have mainly been the result of large carryovers of canned peaches, depressed demand conditions, or other year-to-year influences.

The total quantity of Clingstone peaches going into canning channels is not utilized solely for canned Clingstone peaches. Since the early 1920's, some quantities each year have gone into fruits for salad and fruit cocktail. By 1934, 6 per cent of the tonnage canned went into fruit cocktail and 5 per cent into fruits for salad, a total of about 11 per cent. Tonnage going into fruit cocktail has increased steadily since that time. In 1947, about 19 per cent of the total tonnage of Clingstone peaches canned went into this product. The quantities used in fruits for salad decreased

Table 7: CALIFORNIA FARM RETURNS FROM CLINGSTONE PEACHES

Crop years	Fresh sales			Canned	Dried
	All fresh	Out of state	In state		
	Dollars per fresh ton				
Averages:					
1935–1939	22.60	23.60	22.40	25.74	14.42
1940–1944	56.84	67.20	55.40	51.18	32.22
Years:					
1945	98.60	96.00	99.00	63.50	38.00
1946	88.10	79.00	90.00	63.50	37.60
1947 (Prelim.)	58.90	.....	.....	49.70	21.60

in 1940, was discontinued from 1943 to 1945, and was negligible in 1946 and 1947. The canning of spiced Clingstone peaches was first reported in 1936, but this product has taken only very small quantities of the canning tonnage each year, usually about 1 per cent. Mixed fruits were first canned in 1943 and have taken small amounts of Clingstone peaches since then. In 1947, the total quantity going into these four uses was about 23 per cent of the total tonnage canned. Indications are that these products, especially fruit cocktail, will continue taking a greater proportion of the canning tonnage of Clingstone peaches.

Table 8: CALIFORNIA'S PERCENTAGE OF UNITED STATES CANNED PEACH PACK

Years	California	Other states
	Per cent of total United States pack	
Five-year averages:		
1920–1924	100.0	0
1925–1929	97.8	2.2
1930–1934	99.0	1.0
1935–1939	97.0	3.0
1940–1944	91.5	8.5
Annual:		
1945	89.3	10.7
1946	89.8	10.2
1947	88.2	11.8

Table 9: CALIFORNIA'S PEACH PACK, SHOWING PERCENTAGE OF CLINGSTONES AND FREESTONES

Years	Clingstones	Freestones
	Per cent of total pack (excluding spiced peaches)	
Five-year averages:		
1920–1924	82.2	17.8
1925–1929	95.1	4.9
1930–1934	98.7	1.3
1935–1939	94.4	5.6
1940–1944	91.5	8.5
Annual:		
1945	96.0	4.0
1946	94.4	5.6
1947	91.1	8.9

California Pack

The commercial canning of peaches in the United States has, until recent years, been confined almost entirely to California. Table 8 shows the proportions of the total pack produced in California and other states since 1920. Until 1940, virtually the total United States canned peach pack originated in California. Since then, the packs in other states have increased. It is too early to determine whether this increase is the beginning of an upward trend in pack by other states, or merely the result of wartime and postwar increased demand. Even so, California remains, by far, the primary source of United States canned peaches.

Clings Dominant

The California canned peach pack, noted above, consists of both Clingstone and Freestone peaches. Actually, however, Clingstones have been dominant during the last twenty years. Table 9 shows the proportion of total California pack made up of Clingstones and Freestones since 1920. Prior to 1920, the Freestone peach pack was of substantial importance, contributing about 30 per cent of the total California pack. The marked decline in importance of Freestones began in 1922, and by 1927 the Freestone pack had decreased to relative insignificance. Some recovery was made from 1937 to 1942, and again in 1947, but California Clingstone peaches remain the dominant factor in the United States peach pack.

Factors Limiting Pack

The annual packs of California Clingstone peaches, from 1919 to 1947, are summarized in figure 4. The total quantity of fruit produced in any year sets a limit on the size of the pack. But such factors as carryover of canned peaches,

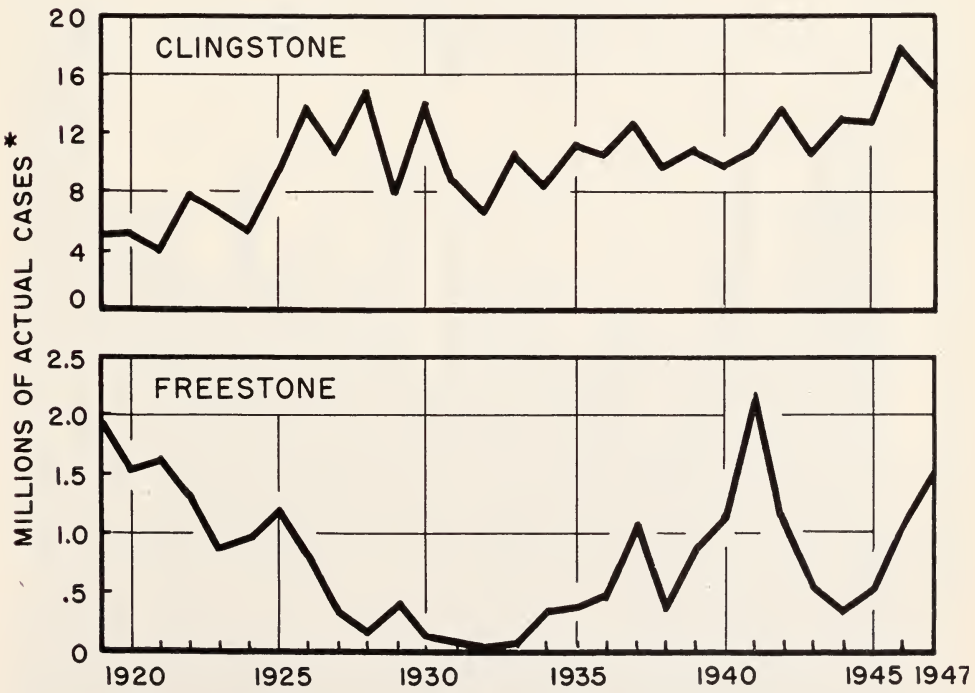
estimated demand, the previous year's movement, and marketing control programs, actually determine the exact size of the pack within the limits of the tonnage produced. During the last half of the 1920 decade, the level of the Clingstone peach pack was more than twice the level during the first half of the decade. This increase in the size of the pack was due both to the increase in production and the improving demand conditions. Production increased so much in 1926, 1927, and 1928 that voluntary industry controls were instituted in both 1927 and 1928 limiting the pack to No. 1 grade fruit. Frosts decreased production in 1929, and all suitable fruit was canned. But in 1930 a record crop was produced and by voluntary controls the pack was limited to 13 million cases of No. 1 fruit.

Following 1930 there was a considerable decrease in the pack, but in 1932 there began a gradual upward trend which continued through 1945, although there was fluctuation from year to year. However, at no time throughout this gradual rising trend did the packs exceed the 1926, 1928, or 1930 packs. It was not until 1946 that a new record pack was canned, 17.6 million actual cases. The 1947 pack was somewhat less at 15.3 million actual cases.

Industry Controls

Yearly controls of some sort were used by the industry in nine of the fifteen years from 1931 to 1945. Compulsory controls, that is those undertaken under a specific enabling act, were started in 1933 under the Agricultural Adjustment Administration. From 1936 on, the control programs were under authority of California legis-

Figure 4: CALIFORNIA CANNED PACKS OF CLINGSTONE AND FREESTONE PEACHES



*The cases scale for Freestone is expanded to eight times the scale for Clingstone.

lation. Late in 1945 a five-year marketing order[1] was approved which was used in 1946 and 1947 to limit the pack to No. 1 and No. 3 grades of fruit.

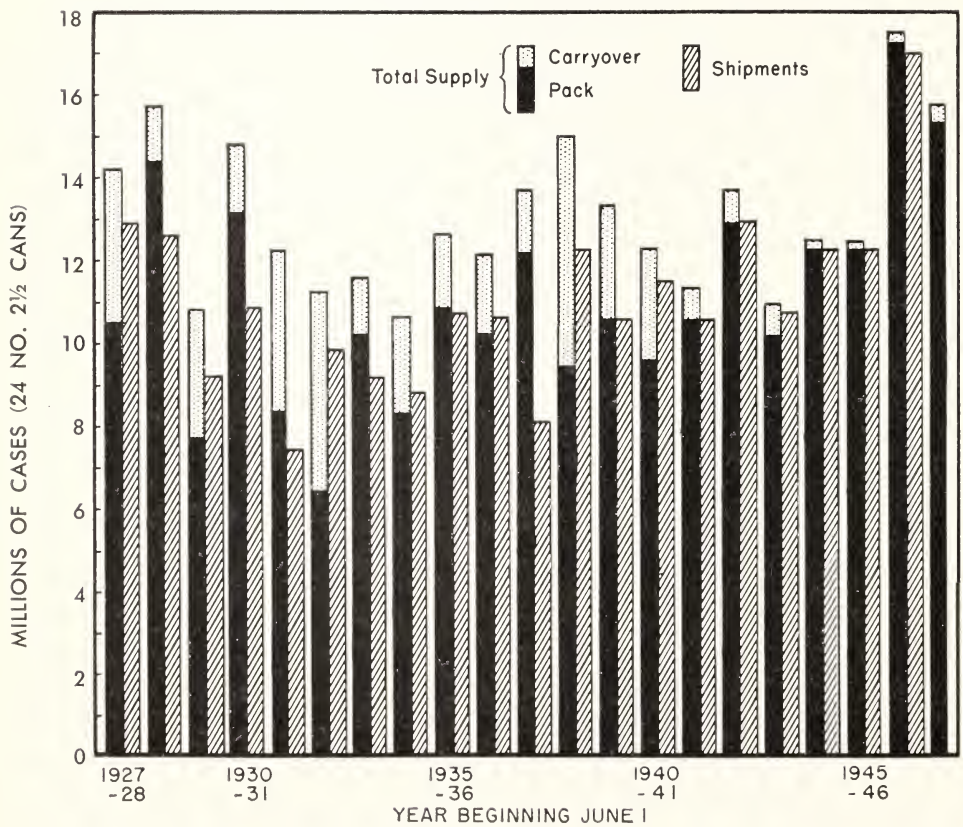
Freestone Pack

As mentioned previously, the size of the Freestone peach pack has not been significant for many years, as figure 4 reveals. The gradual decrease, beginning in 1920. was culminated in the 1932 pack of only 24,420 cases. Thereafter, the Freestone pack gradually increased to a new high in 1941 of 2,171,526 cases. Since then, the pack decreased and later increased, but it still is relatively insignificant when compared to the Clingstone pack.

[1] Marketing Order for Canning and Freezing Cling Peaches (1945–1950).

The annual packs of specialty items of which Clingstone peaches are a component—fruit cocktail, fruits for salad, and mixed fruits—have increased two and one half times since 1936. Total pack of these specialty items in 1947 was 10,100,000 cases. (See table 10.) The greatest increase is in the pack of fruit cocktail, composed of 48 per cent by weight of Clingstone peaches. The fruit salad pack has shown a gradual decrease during the past few years. The canning of mixed fruits was begun in 1943, but has yet to reach significant size. Likewise, the pack of spiced peaches, for which Clingstones are used entirely, is still relatively small. Nevertheless, it seems probable that the pack of fruit cocktail will continue increasing, even if not at as rapid a rate as during the last few years.

Figure 5: **CLINGSTONE PEACHES—CALIFORNIA PACK, CARRYOVER, AND SHIPMENTS**



Movement and Stocks

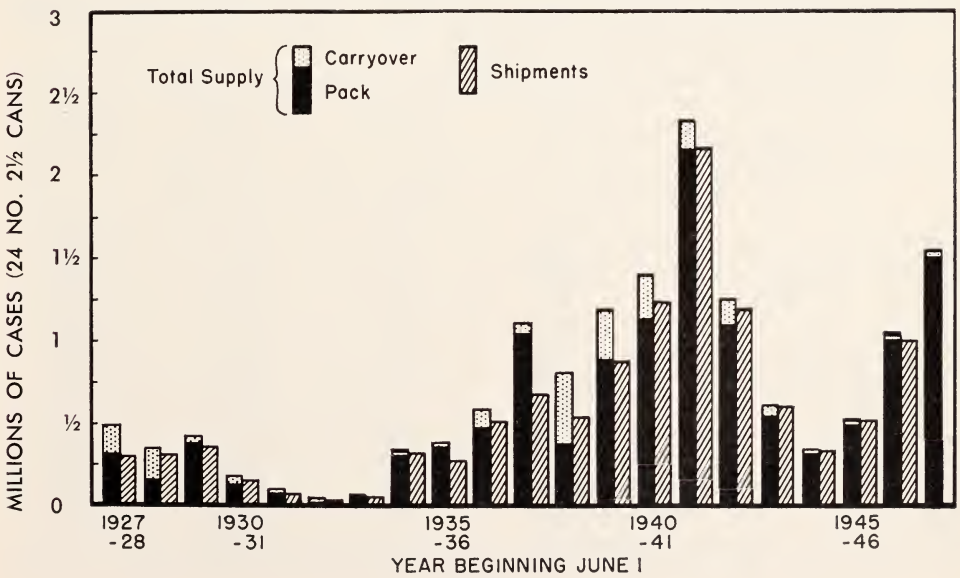
The total supply of canned peaches available for shipment in any year is the result of the pack during that year plus the carryover from the preceding year. The amount of the total supply which will be shipped in any year depends on many factors. Among these are the price canners quote for their product, the stocks already in distributors' hands, the level of consumer purchasing power, the supply and prices of competing canned goods, the extent of government purchases, and export demands. Each of these factors influences the total movement of canned peaches during any one year.

Figure 5 shows the pack, carryover and shipments (domestic and export) for California canned Clingstone peaches since the 1927–28 season. From that season through the 1934–35 season, the trend of shipments was downward. This was largely the result of the pronounced decline in the buying power of consumers. In spite of the generally reduced packs after 1930, shipments were insufficient to prevent heavy carryovers, especially in 1931–32 and 1932–33. Beginning with 1935–36, shipments increased to a higher level of about 11 million cases and remained at that level through 1941–42. But the yearly pack also increased so that carryovers were not reduced appreciably. In fact, a record carryover of better than 5½ million cases resulted in 1938–39 because of the decreased shipments during the 1937–38 season.

Carryovers Drop

Beginning with the 1941–42 season, carryovers each year dropped considerably. The yearly pack remained at a fairly high level through 1945–46, jumped to a new high of 17,285,040 standard cases (24 No. 2½'s) in the following year, and decreased some in 1947–48. In spite of these increased packs, shipments each year since 1941–42 averaged almost 97 per cent of the total supply available; thus, packers' carryovers were extremely small. The fact that shipments kept pace with the increased supplies of canned Clingstone peaches was the result of increased government purchases, the increase in consumer purchasing power,

Figure 6: FREESTONE PEACHES—CALIFORNIA PACK, CARRYOVER, AND SHIPMENTS



and the imposition of ceiling prices on canned peaches. However, beginning with the 1946–47 season, an appreciable part of the packers' large shipments was absorbed in building up wholesaler and retailer stocks. With the supply pipe line back to more of a normal level, packers' sales and shipments become more directly influenced by the movement from retail outlets to consumers.

Specialty Packs

Since peaches are an important component of fruit cocktail, fruits for salad and mixed fruits, it is interesting to review the trends in pack, carryover, and shipments of these items. Table 10 gives the data for the total of these specialty products, although the fruit cocktail pack constitutes most of this total pack. Whereas fruit cocktail was 60 per cent of the total specialty pack in 1936, it was 93 per cent in 1947. The general trend of both pack and shipments of these products has been upward. Since 1940 shipments have increased at a faster rate than pack, resulting in a decrease in the carryover each year. Carryovers have been "excessive" in only two years since 1936. The 1938 carryover of 1,736,000 cases came as a result of an increase in the 1937 pack over the 1936 pack while shipments in 1937 remained about the same as in 1936. The pack was greatly reduced in 1938 and shipments that year increased so that the carryover into 1939 was small. However, a large pack in 1939 outweighed the increase in shipments and the 1940 carryover was again "excessive." Since then, better than 90 per cent of the total supply available has been shipped each year and carryovers have been gradually reduced.

Freestone peaches have generally moved well since 1934 as shown in figure 6. Expansion of both pack and shipments began in 1934–35. Shipments kept pace with the yearly pack until the recession of 1937–38. The 1938–39 carryover exceeded the pack of that year, but from then through 1944–45, shipments each year either equalled or exceeded the pack so that this excessive carryover was gradually reduced. In 1944–45, the carryover was only 2,000 cases. With the exception of the 1937–38 season, stocks of canned Freestone peaches have moved very well throughout this period. However, it must be remembered that the period was essentially one of an increasing or a high level of consumer purchasing power.

Table 10: CALIFORNIA TOTAL PACK, CARRYOVER AND SHIPMENT OF CANNED FRUIT COCKTAIL, FRUITS FOR SALAD, AND OTHER MIXED FRUITS, 1936–1947

Year beginning June 1	Total pack	Carryover June 1	Total supply available	Shipments
	Thousand cases, No. 2½ can basis			
1936	3,644	575	4,219	3,595
1937	4,653	624	5,277	3,541
1938	2,949	1,736	4,685	4,326
1939	5,204	359	5,563	4,657
1940	4,949	906	5,855	5,097
1941	5,741	758	6,499	5,800
1942	6,131	699	6,830	6,510
1943	5,696	320	6,010	5,860
1944	6,335	156	6,491	6,373
1945	6,600	118	6,718	6,608
1946	9,043	110	9,153	9,034
1947	10,100	119	10,219	.....

CONSUMPTION

Civilian Consumption

Data are not available for calculation of the actual per capita civilian consumption of California canned Clingstone peaches. However, since California Clingstones have averaged about 90 per cent of the total United States canned peach pack over the last twenty years, information on United States canned peaches can be applied with some accuracy to California canned Clingstones.

With the exception of wartime decreases in 1943 and 1944, the general trend in shipments for civilian consumption has been slightly upward since 1934. A drop in 1937–38 was largely due to the business recession in those years. Decreases in 1941, 1943, and 1944 were largely due to wartime influences. In both 1943 and 1944, government purchases and shipments to war services were heavy, leaving smaller quantities available for domestic civilian consumption. The gradual upward trend in shipments for civilian consumption, however, was resumed in the postwar years.

Whether or not this upward trend will continue is difficult to say. Some of the shipments by packers were absorbed in rebuilding wholesalers' and retailers' stocks to a normal level. Also, with the exception of 1938, consumer purchasing power was increasing during the entire period under consideration. Thus, this factor may have been partly responsible for the increase in shipments for domestic consumption. It is reasonably clear that a strong demand and high domestic consumption will be required to absorb canned peach packs as large as we have had in the past year or two.

The per capita shipments for domestic civilian consumption of all mixed fruits (fruit cocktail, fruit for salad, and other mixed fruits) show an upward trend much stronger than for canned peaches. Again, decreases in 1943 and 1944 were due primarily to increased supplies going into war use. However, decreased packs in those years also resulted in a smaller total supply being available for shipment. The long-time trend was resumed in the postwar years. Although increasing consumer buying power may have contributed to this upward trend in consumption, it is very likely that the steady increase is also evidence of changing consumer buying patterns in favor of these items.

Affect of Income Level

It was mentioned above that there appears to be a definite relation between the level of income and consumption of canned peaches. Further evidence of the existence of such a relationship can be found in the several consumer expenditure studies made by the United States Department of Agriculture and the Bureau of Labor Statistics. The results of one of the B.L.S. studies is summarized in table 11 for canned peaches. The study was made in forty-two selected cities from 1934 to 1936. A moderately active adult male was considered a unit, and other family members were counted in proportion with due regard to differences in sex, age, and activity. The results show definitely that as the total expenditure for all goods and services per adult-unit increases, the consumption of canned peaches per adult also increases.

Table 11: CONSUMER EXPENDITURES RELATED TO PURCHASES OF CANNED PEACHES

Total annual expenditure per moderately active adult male for all goods and services	Average quantity of canned peaches purchased per adult male in one year
dollars	pounds
Under 400	1.8
400 to 600	3.3
600 and over	4.8

Table 12: CANNED PACK OF FREESTONE PEACHES, APRICOTS, PEARS, PINEAPPLES, AND CLINGSTONE PEACHES, 1921–1946

Year	California Freestones	California apricots	Pacific Coast pears	Hawaiian pineapples	Total	California Clingstones
	Thousands of cases—actual					
Five year averages:						
1921–1925	1,196	2,338	2,281	6,297	12,112	6,645
1926–1930	364	2,977	3,827	9,673	16,841	12,183
1931–1935	176	2,318	4,336	8,000	14,830	9,010
1936–1940	796	3,096	4,727	10,593	19,212	10,611
1941–1945	946	4,113	5,120	10,644	20,823	12,022
Annual:						
1946	1,043	10,422	5,237	10,237	26,939	17,605
1947	1,505	3,064	5,666	11,000	21,235	15,325

All of the above mentioned consumption studies were made for United States canned peaches. A different type of study has been made for California canned peaches alone.[2] The results, however, generally substantiate those of the other studies. This statistical analysis related variations in the domestic consumption (shipments) of California canned peaches with the f.o.b. prices of California canned Clingstone peaches, the index of nonagricultural income, and an adjusted index of competing canned fruit prices. The results showed that, other factors remaining constant, an increase in the f.o.b. price was accompanied on the average by a decrease in domestic consumption. Likewise, when nonagricultural income increased, other factors remaining constant, consumption also increased. The same was true for the prices of competing canned goods—when they increased, domestic consumption of peaches increased. These three factors combined account for almost all the variations in domestic consumption of California canned peaches.

In summary, then, it can be stated that the volume of California canned Clingstone peaches taken by domestic civilian consumption channels depends largely upon four factors—the f.o.b. price of California canned Clingstones, the prices of competing canned fruits, the level of nonagricultural income, and the distribution of that income among the population.

Fruits in Competition

The principal canned fruits competitive with canned peaches are canned apricots, canned pears, and canned pineapples. However, when considering canned Clingstones alone, canned Freestones should be added to this competitive list. The packs of these fruits (California Freestones, California apricots, Pacific Coast pears, and Hawaiian pineapples), along with the California Clingstone peach pack, are shown in table 12. The situation with respect to the pack of California Freestone peaches has been discussed previously. The increase in the Freestone pack in recent years as well as other competitive packs, is of considerable significance to the cling peach industry.

The pack of California apricots increased very slowly throughout most of the period; but in the last few years, and especially in 1946, it increased sharply. The 1947 pack of apricots, however, was less than one third of the 1946 output. The pack of pears on the Pacific Coast has

[2] See Wellman, H. R. *Statistical Analysis of the Annual Average F.O.B. Prices of Canned Clingstone Peaches, 1924–25 to 1939–40.* Giannini Foundation of Agricultural Economics. June, 1940. Mimeographed Report No. 71.

shown a steady upward trend throughout the period. This trend resulted in the 1947 pack being 148 per cent greater than the 1921–1925 average pack. The greatest increases in the Hawaiian pineapple pack came during the 1920's. After some decrease during the early depression years, the pack returned to a level of about 10 million cases. Over the last ten years, the pineapple pack has remained fairly constant at that level, with some increase in 1947.

Indications

More indicative of the over-all competition is the combined pack of competitive fruits. By 1947 the combined pack of all four fruits had increased 75 per cent over the 1921–1925 average. Even though the 1947 pack of Clingstone peaches showed a somewhat larger increase—131 per cent over the 1921–1925 average—the increase in the pack of competitive fruits has offered increasing competition to the Clingstone peach industry. Generally their increased supplies resulted in a lowering of the prices of the competing canned fruits, and these increased supplies and reduced prices have had a marked effect upon the price which canners could obtain for a given supply of canned Clingstone peaches. With increased packs of other fruits, more serious competition can be expected in the future.

Foreign Markets

Prior to the start of World War II, the export market represented a significant factor in the utilization of the United States canned peach pack.[3] From 1934–1935 through 1939–1940 shipments to foreign markets averaged 1.7 million cases, or about 15 per cent of the total shipments of canned peaches. The beginning of hostilities in Europe in 1939 virtually closed the important foreign markets, and exports remained extremely small until 1946–47. In that year, foreign shipments jumped to 1.2 million cases but did not reach their prewar level. However, in the face of difficult economic conditions throughout Europe, and the lack of dollar exchange, the partial recovery was significant. As economic conditions improve abroad, it is quite possible that the export market will regain its prewar importance.

Throughout the years, the United Kingdom has been by far the most important export market for canned peaches. As shown in table 13, an average of about 89 per cent of all exports during 1934–1939 went to the United Kingdom. Of the remaining markets, none took over 2 per

[3] Export data are available only for United States canned peaches. It should be remembered, however, that California Clingstones have made up about 90 per cent of the United States canned peach pack over the last twenty years.

Table 13: DISTRIBUTION OF UNITED STATES CANNED PEACH EXPORTS

Export market	1934–1939 average	Year beginning July 1						
		1940	1941	1942	1943	1944	1945	1946
		Thousands of pounds						
Total exports	75,512	3,964	17,962	12,036	29,888	35,541	26,922	51,669
Europe	71,483	196	11,514	3,994	10,300	19,425	5,866	34,767
United Kingdom	67,033	0	11,510	3,986	10,118	15,143	12	23,427
Rest of Europe	4,450	196	4	8	182	4,282	5,854	11,340
Other than Europe	4,029	3,768	6,448	8,042	19,588	16,116	21,056	16,902

cent of the exports during that period. In the war years, the distribution of the small quantities of peaches exported varied from year to year. The available export data included lend-lease and UNNRA shipments as well as commercial exports for those years. Thus, shipments to the United Kingdom and other European countries varied with lend-lease and UNNRA shipments. In contrast, other than European markets showed substantial increases in the quantities of peaches imported. Whereas the average exports to these countries were only about 4 million pounds during 1934–1939, shipments increased to about 17 million pounds in 1946.

It is, of course, too soon after the cessation of the war to determine the exact postwar trends in exports. The European countries which took 95 per cent of the exports prior to the war have not yet recovered from the effects of the war and have not resumed normal trading. Though there have been increases in the exports to other than European countries, these markets still do not take sufficient quantities to counterbalance the loss of much of the European market. The future of exports is still unknown.

PRICES PAID ALONG DISTRIBUTION ROUTE

Prices Paid to Growers

THE AVERAGE prices paid to California growers for canning Clingstone peaches have varied widely over the last twenty-five years. The 1920–21 crop was sold for the highest average price, $100 per ton, while the 1938–39 crop brought the lowest returns, only $8.70 per ton. The average prices received by California growers of peaches since 1910 are shown in figure 7. After the sharp rise during the World War I period, the trend of prices to growers was generally downward through the 1932 season.

Fluctuations

The exceptionally profitable years of 1919 and 1920 provided the initial stimulus to the heavy plantings which occurred in the years immediately following. As a result, and beginning in 1925, production increased rapidly. This increased production, when coupled with the general decline in all farm prices, explains the sharp drop in Clingstone farm prices during the early 1930's. With prices received declining farther and faster than prices paid during the early 1930's, growers began restricting plantings and increasing removals each year. The decrease in production, the industry control plans, and the gradual recovery of consumer buying power resulted in increases in the average price paid growers up through 1937. However, prices received by growers again dropped sharply in 1938, and recovered as we entered the national defense years of 1939–1941.

Future Returns

The average prices received by growers in the 1941 season jumped sharply and continued to increase for the next two seasons. After this initial increase during the first few war years, prices paid growers leveled off, largely because of the institution of price ceilings on the canned product.

Growers enjoyed a period of relatively high profits during these war years, since the prices of commodities purchased did not increase nearly as sharply as did the prices they received for their peaches. In the past year, however, the spread between prices received and prices paid has narrowed somewhat. Reasonable net returns in the future will depend more largely on maintenance of high yields, improved management, and keeping unit-costs of production and operation at a minimum.

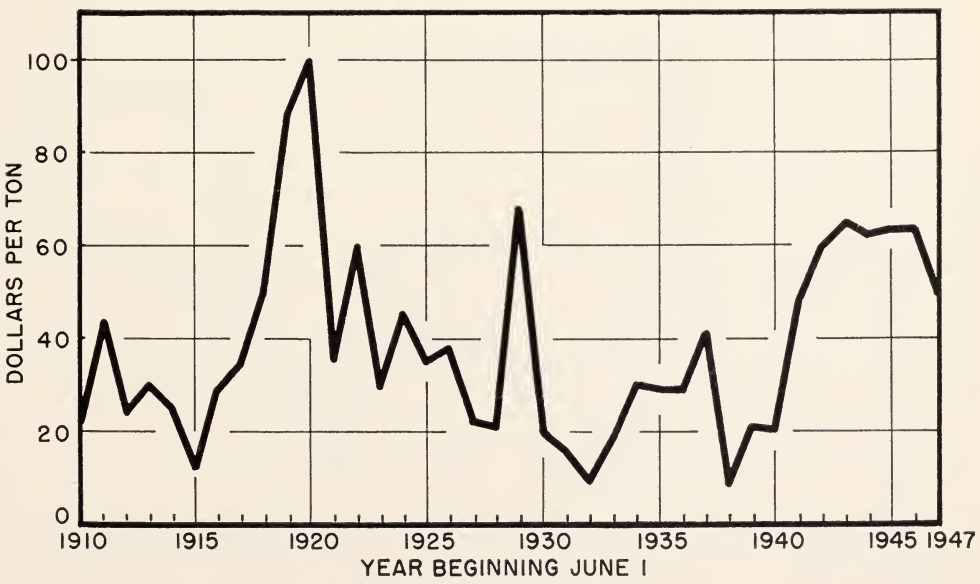
Prices Canners Receive

Since the prices received by growers for Clingstone peaches are directly affected by the prices which canners can obtain for the final product, it is important to compare these two price series as well as the retail price of canned peaches. This comparison is shown in figure 8. Prices of canned Clingstone peaches at the cannery level are available from several sources. There has been compiled a weighted average net realized f.o.b. price for all grades and sizes, covering the period through 1941. Packers' quotations on No. 2½ cling halves can be obtained for some years from the California Fruit News and the New York Journal of Commerce. The most complete series is that compiled by the Bureau of Labor Statistics. Monthly prices are quoted on No. 2½ Clingstone halves f.o.b. cannery in California. This latter series is used in figure 8.

Two tendencies are apparent in the price comparison: (1) the movement of both prices paid to growers and prices received by canners has been in the same general direction; (2) the changes in growers' prices have been much more pronounced than the changes in canners' prices. This is a tendency common to many farm products. In general, when prices are rising, farm prices tend to rise more than f.o.b. or wholesale prices, which in turn rise more than retail prices. Also when prices are falling, farm prices tend to drop most sharply and retail prices the least.

The f.o.b. price movement of California canned Clingstones since 1923 is illustrated in figure 8. There have been four distinct periods in the price movement. From 1923 through 1929, canners' prices remained fairly constant. Even though consumer buying power was increasing, supplies of canned Clingstones also increased, thus counteracting the effects of an increased demand. For the next three years, or through 1932, canners' prices declined steadily in spite of reduced shipments, largely because of the sharp decline in consumer purchasing power. In 1934 and 1935 some recovery was made,

Figure 7: AVERAGE PRICES RECEIVED BY CALIFORNIA GROWERS FOR CLINGSTONE PEACHES



but thereafter and through 1940, canners' prices decreased slightly due in part to increasing supplies of canned peaches and to the recession in 1937 and 1938. The increase in canners' prices since 1941 was, of course, due to the wartime influences. Undoubtedly this increase would have been greater had not price ceilings been instituted.

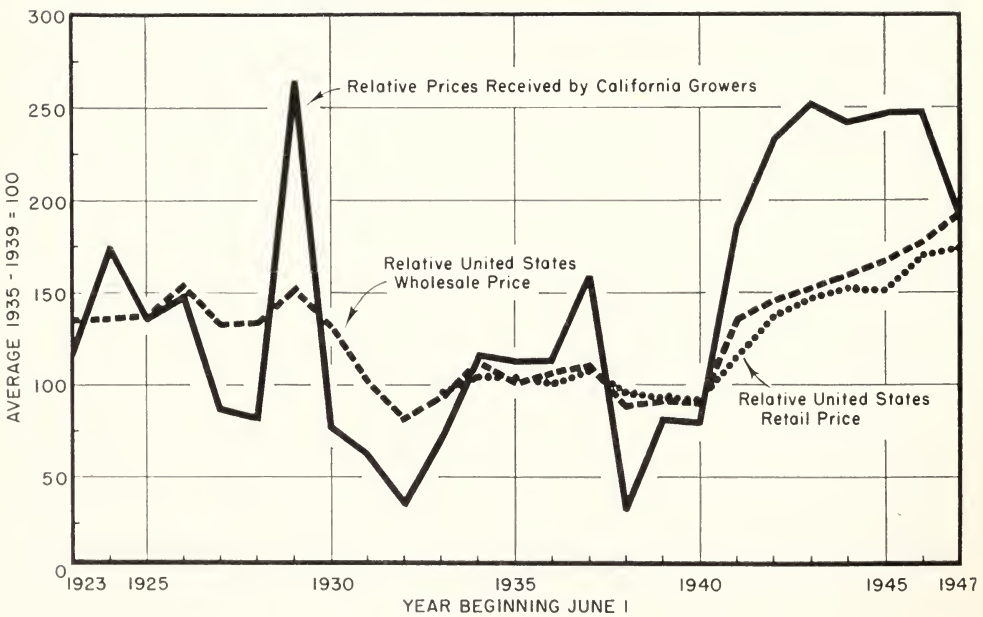
In January of 1946, a change was made in the reported f.o.b. price series from standard grade to choice grade. Consequently, the 1945–46 and 1946–47 quotations are at a slightly higher level than the quotations for standard grade would be. The 1945–46 price for standard grade would have been the same or only slightly higher than the 1944–45 price, and the 1946–47 price for standard grade would have shown a somewhat sharper increase than is shown for the choice grade.

Average Retail Prices

Retail prices of canned peaches have been collected by the Bureau of Labor Statistics since August, 1933. Monthly figures are available for the United States average price of grade B choice Clingstone halves. These relative prices are also shown in figure 8. As in canners' prices, price ceilings in the war years prevented retail prices from advancing as sharply as did farm prices. In the past year, the availability of a large supply of peaches for canning, as well as other fruits for canning and fresh consumption, resulted in a decline of farm prices. Much, but not all, of that decline was later reflected in retail prices during the 1947–48 marketing season.

Peach growers and canners are, and should be, interested not only in the prices they receive but also the prices at other points on the distribution route from grower to consumer. Grower-canner coöperative promotional activities, such as the advertising campaigns sponsored by the California Cling Peach Advisory Board, have been designed to expand consumers' demand for canned peaches. But growers and canners might well realize that there are many factors which enter

Figure 8: FLUCTUATIONS IN PRICES RECEIVED BY GROWERS FOR CLINGSTONES, COMPARED WITH RELATIVE WHOLESALE AND RETAIL PRICES



into consumers' choice of purchases and how much they will pay for what they buy. Such factors include their level of income, habits and tastes, and the prices of competing items as well as those of canned peaches.

Growers' and canners' costs are not of direct concern to consumers in making up their mind about whether or not to buy canned peaches. The fact that production and canning costs are rising does not mean consumers will pay more for canned peaches. Increased sales of canned peaches can be brought about only by expanded consumers' income, and their increased demand for the product, or a decrease in the price of canned peaches in relation to the prices of items competitive with peaches in the minds of consumers.

The tables and figures appearing in this circular are summaries of more detailed tables, which are published in a separate Statistical Supplement in mimeographed form and which give sources in detail. This supplement may be obtained by writing to the Giannini Foundation of Agricultural Economics.

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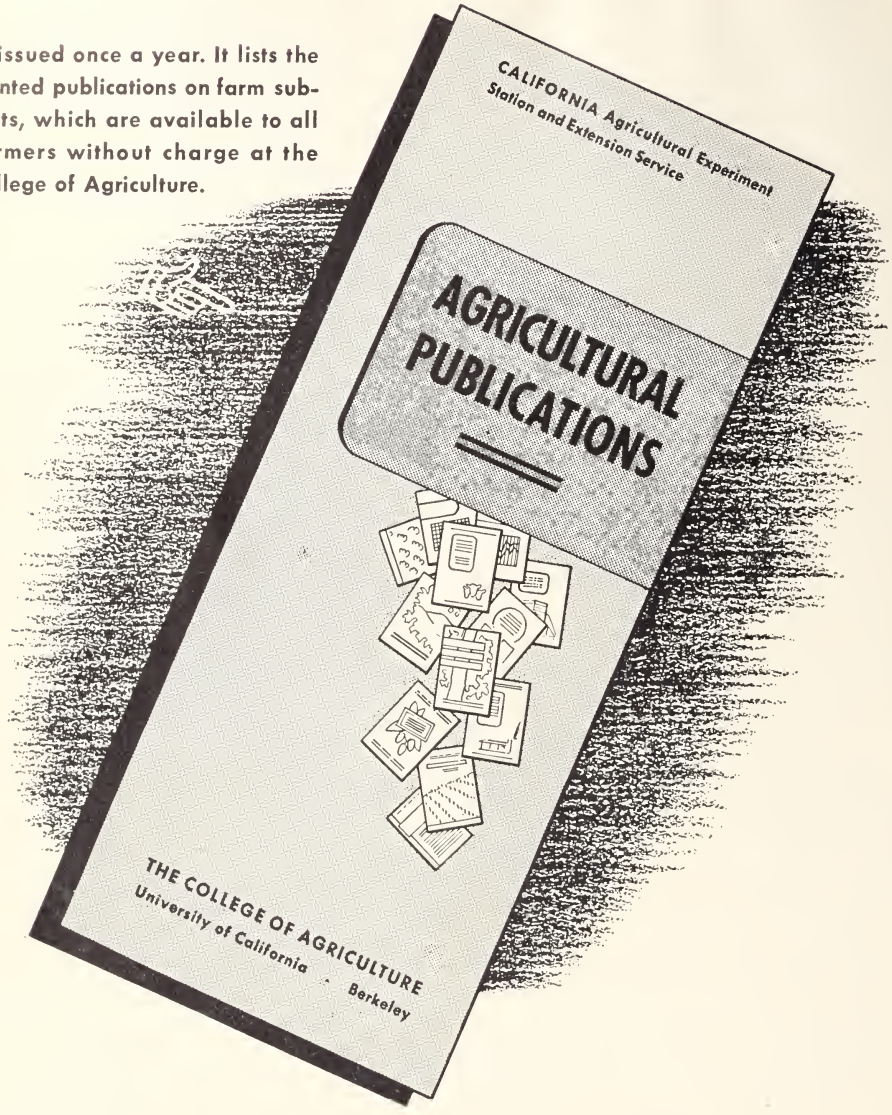
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